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10/574,205	04/25/2007	David Roy Winterbottom	MCI-8105	5560
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Christopher P Harris			EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/574,205	<b>Applicant(s)</b> WINTERBOTTOM ET AL.
	<b>Examiner</b> ALESSANDRO AMARI	<b>Art Unit</b> 2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 12 April 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 39-79 is/are pending in the application.
- 4a) Of the above claim(s) 45-50 and 55-73 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 39,40,42-44, 51-54 and 74-79 is/are rejected.
- 7) Claim(s) 41 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 April 2010 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 39, 40, 42 and 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Durst, Jr. et al (hereafter "Durst") US 2005/0063027.

In regard to claim 39, Durst discloses (see for example, Figs. 2, 3, 4, 6, 7) a data carrier comprising: a hologram (124, 148) storing data to reproduce an image of a portion of a human body characteristic of an individual; and a second data bearing device (a watermark); and wherein data stored by said second data bearing device is verifiable using data stored in said hologram as described in paragraphs [0059] - [0060], [0063], [0067], [0068], [0083] – [0088], [0092], [0094] and [0100] - [0101].

Regarding claim 40, Durst discloses that said data stored by said second data bearing device comprises first and second data, said first data being for verification of one of said first data and said image with the other, and second data being verified by said verification as described in paragraphs [0059] - [0060], [0063], [0067], [0068], [0083] – [0088], [0092], [0094] and [0100] - [0101].

Regarding claim 42, Durst discloses that said image comprises a substantially two-dimensional image as described in paragraph [0109] and [0141].

Regarding claim 44, Durst discloses that said second data bearing device comprises an integrated circuit memory device as described in paragraphs [0088] and [0102].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 43, 51, 52, 53, 54, 74 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durst US 2005/0063027 in view of Kodama US 2004/0121241.

Regarding claim 43, Durst teaches the invention as applied to claim 39 above but does not teach that the hologram comprises a volume reflection hologram.

In regard to claim 51, Durst teaches (see for example, Figs. 2, 3, 4, 6, 7) a data carrier comprising: a hologram (124, 148) storing data to reproduce an image of a graphic associated with a product; and a second data bearing device (a watermark) storing data unique to the data carrier that is verifiable by the hologram as described in paragraphs [0059] - [0060], [0063], [0067], [0068], [0083] – [0088], [0092], [0094] and [0100] - [0101].

However, in regard to claim 51, Durst does not teach that the hologram is a volume reflection hologram.

Regarding claims 43 and 51, Kodama teaches the use of a volume reflection hologram for authentication purposes as described in para. [0027]. The known technique of utilizing a volume reflection hologram would have yielded the predictable result of enhancing the security of the data carrier since coherent light sources must be used and thus producing a copy of the hologram is more difficult. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a volume reflection hologram as taught by Kodama in the data carrier of Durst in order to enhance the counterfeiting properties of the data carrier for authentication purposes.

Regarding claim 52, Durst discloses that said data carrier is substantially planar and wherein said graphic image is spaced away from the plane of said data carrier as described in paragraphs [0063], [0068] and [0069].

Regarding claim 53, Durst discloses that said second data bearing device comprises a unique, machine-readable code as described in paragraphs [0083] – [0094].

Regarding claim 54, Durst discloses that said data carrier is substantially planar and wherein said second data bearing device defines an image spaced away from the plane of said data carrier and comprising said unique data as described in paragraphs [0063], [0068] and [0069].

In further regard to claim 77, Kodama teaches that the hologram is configured to reconstruct in a plurality of component colors as described in para. [0027] and [0062].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the Durst-Kodama hologram reconstruct in a plurality of component colors so as to achieve improved aesthetics and more enhanced security is ensured by determination of whether or not the volume hologram has such aesthetic properties.

Regarding claim 74, Durst teaches the invention as applied to claim 39 above but does not teach that the hologram is configured to reconstruct in a plurality of component colors. Kodama teaches that the hologram is configured to reconstruct in a plurality of component colors as described in para. [0027] and [0062].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the Durst hologram reconstruct in a plurality of component colors so as to achieve improved aesthetics and more enhanced security is ensured by determination of whether or not the volume hologram has such aesthetic properties.

5. Claims 75, 76, 78 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durst US 2005/0063027 in view of Kodama US 2004/0121241 and further in view of Yamazaki et al (hereafter "Yamazaki") US 5319476.

Regarding claims 75, 76, 78 and 79, the combination teaches the invention as set forth above but does not teach that the plurality of component colors comprise false colors configured to aid in identification or wherein at least one of said component colors is substantially invisible to the human eye. Regarding claims 75, 76, 78 and 79,

Yamazaki teaches that the plurality of component colors comprise false colors configured to aid in identification and wherein at least one of said component colors is substantially invisible to the human eye as described in col. 1, lines 30-53. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize false colors or have at least one of the component colors be substantially invisible to the human eye in order to make it difficult to forge the hologram and enhance its security.

***Allowable Subject Matter***

6. Claim 41 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claim 41 is allowable for at least the reason, "said data stored by said second data bearing device comprises third and fourth data, said third data being for verification of one of said additional data and said third data with each other, and the fourth data being verified by said verification" as set forth in the claimed combination.

***Response to Arguments***

8. Applicant's arguments filed 12 April 2010 have been fully considered but they are not persuasive.

The Applicant argues that Durst discloses encoding a digital watermark into a hologram that is stored on a smart card or chip with the digital watermark being used to

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authenticate the hologram itself. However, claim 39 recites that the data stored in the hologram verifies the data that is stored in the second data bearing device. Durst discloses the opposite of that recited in claim 39 and therefore Durst fails to disclose that the watermark is authenticated or verified by the data stored in the hologram.

In response to the argument, the Examiner directs the Applicant's attention to paragraph [0092] of Durst, reproduced below:

....A smart card is deemed authentic when the watermark information and the smart card information, match or relate in a predetermined mathematical manner. To illustrate, the watermark information can be used to derive (or decode) the smart card information (**or vice versa**). (Bold Examiner's)

Also, paragraph [0103] of Durst, reproduced below:

The data in the chip can be uniquely linked to the digital watermarks such that the inter-dependency is **multi-directional**. In particular, each of the digital watermark messages are augmented with a portion or hash of the data stored in the chip, such as the chip registry. Thus, one security element is hashed and stored in a second security element, and the second security element is hashed and stored back in the first security element. (Bold Examiner's)

Therefore, the data stored in the second data bearing device can be verified using data stored in the hologram as indicated by the passages above and in accordance with the limitations recited in claim 39.

The Applicant further argues in regard to claim 40 that Durst fails to disclose that the data stored by the second data bearing device comprises first and second data, said first data being for verification of one of said first data and said image with the other and

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the second data being verified by said verification. The Applicant asserts that Durst merely discloses verification of a hologram using a digital watermark.

In response to this argument, the Examiner directs the Applicant's attention to paragraph [0085] of Durst reproduced below:

In authentication applications, the message carried in the digital watermark may be related to information that is printed or stored in machine readable form on another part of the object in which the hologram resides. For example, the hologram message may contain a **first identifier** that refers to the bearer or issuer of the object (e.g., credit card, identity document, ticket, etc). A **second identifier** is printed or stored on the object in a machine readable feature such as a bar code, RF tag, magnetic stripe, magnetic ink, etc. If the watermark is unreadable, or the first and second identifiers do not match, then the object is deemed to be a fake. To constitute a match between the first and second identifiers, the identifiers may satisfy a predetermined relationship, such as one being a one way cryptographic hash of the other, one pointing to a database entry that stores the other identifier, both pointing to a database entries with matching information, etc. (Bold Examiner's)

Therefore, Durst does teach that the second data bearing device comprises first and second data (i.e., first identifier, second identifier, respectively); said first data being for verification of one of said first data and said image with the other and the second data being verified by said verification in accordance with the limitations in claim 40.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALESSANDRO AMARI whose telephone number is (571)272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2 July 2010

/Alessandro Amari/  
Primary Examiner, Art Unit 2872